have interest and importance to us as members of the medical profession; being the utterances of one of the most distinguished and successful physicians this country has produced, and they are worthy of their source. In the essay on alimentation in disease he urges the importance and necessity of a liberal supply of food to patients suffering from febrile or wasting disease, regarding their disinclination for it as no greater contraindication to its use than their insensibility to over-distension of the bladder would be a reason for neglect on the part of the physician to relieve this condition. He calls attention to the fact that even where there is a positive repugnance for food it is generally retained and digested. These essays, the work perhaps of Dr. Flint's leisure hours, give us an insight into the principles which guide him in the practice of his profession, clearer perhaps than that which is derived from his systematic writings.

J. H. H.

ART. XXII.—*On the Origin and Development of the Coloured Blood-Corpuscles in Man.* By Dr. H. D. SCHMIDT, New Orleans, La. Read before the Royal Microscopical Society (London), January 7, 1874. Reprint from the Monthly Microscopical Journal, of London, February 1, 1874. 8vo. pp. 23.

THIS meritorious effort to solve one of the already venerable problems, respecting the human red blood-corpuscles, seems to have been the result of a wise determination to utilize, as far as possible, the very young products of conception, procured by the writer, for investigation into the history of the nervous system.

In examining a fresh human embryo about one inch in diameter, Dr. Schmidt found that a minute fragment, snipped out from the wall of the umbilical vesicle (?), was composed chiefly of very large, clear hexagonal cells, with large round nuclei, supported by a delicate fibrous stroma, arranged so as to form fine canals, ramifying through the substance of the membranous wall. These canals were filled with embryonic red blood-corpuscles, many of them similar to the red disks of adult life, but a minority made up of "breeding or mother-corpuscles," ranging in diameter from about $\frac{1}{2800}$ to $\frac{1}{1200}$ of an inch, containing from one to four embryo blood-disks, and, furthermore, distinguished by certain regularly-formed concave depressions on their surface, corresponding to the segments of spheres.

Our author remarks in regard to these mother-corpuscles: "So far as I am able to judge from careful examination of these bodies, as well as of others taken from older human embryos, their process of multiplication consists therein, that in [in that within?] the substance of the mother-body, and near its surface, the separation of a small portion, globular in form, takes place, which represents the embryo blood-corpuscles. Enlarging at the expense of the mother substance, this makes its way to the surface, and finally detaching itself, leaves behind a concave depression corresponding to its form."

By a tissue of ingenious reasoning, largely composed of observed facts, held together, however, by a moderate *stroma* of hypothesis, Dr. S. further endeavours to show that these "mother blood-corpuscles" are identical with the large round nuclei, of the very large hexagonal cells, composing the follicles in the wall of the umbilical vesicle as above described. To the follicular or gland-like *structure* of these vesicular parietes (similar to that recently demonstrated by Klein in the omental peritoneum), which Dr. Schmidt has discovered, he attributes, therefore, the gland-like *function*, of producing the "mother blood-corpuscles," so long known as the nucleated red blood-globules of early fœtal life, and which he believes subsequently give birth to the biconcave disks which alone are found in the adult organism.

These results, contradictory as they are to the conclusions of Kölliker, Klein, Balfour, and others, in regard to the origin of the red corpuscles of the blood, can hardly be accepted as proved, until corroborated by other investigators, but, coming as they do from an observer well known for patient and accurate research, we commend them to microscopists generally as well worthy of careful attention. J. G. R.

ART. XXIII.—*Electro-Therapeutics.*

1. *Electro-Therapeutics: A Condensed Manual of Medical Electricity.* By D. F. LINCOLN, M.D., Physician to the Department of Diseases of the Nervous System, Boston Dispensary. Philadelphia: Henry C. Lea, 1874.
2. *Clinical Researches in Electro-Surgery.* By A. D. ROCKWELL, A.M., M.D., Fellow of the New York Academy of Medicine, Electro-Therapeutist to the New York State Woman's Hospital; and GEORGE M. BEARD, A.M., M.D., Fellow of the New York Academy of Medicine, Electro-Therapeutist to the Demilt Dispensary. New York: William Wood & Co., 1873.
3. *Treatment of Nervous-Rheumatic Affections by Static Electricity.* By Dr. A. ARTHIUS. Translated from the French by J. H. Eldridge, M.D., Professor of General Therapeutics, Rush Medical College, Chicago. Chicago: W. B. Keen, Cooke & Co., 1874.

1. ELECTRICITY, as a remedial agent, does not seem to lose the confidence of the profession, except when too much is claimed for it. For many years it remained a neglected aid, but has latterly been rapidly advanced by scientific zeal, and is now regarded with general favour. Electro-therapeutists are, however, prepared for disappointments, while not surprised at unexpected, or even startling successes.

"Those who, on the one hand, believe that electro-therapeutics is the one great problem of the future, and those who, on the other hand, suspect that it is all a delusion, will be equally disappointed."[1]

It is, as usual, the middle path in which truth travels. At present, too, the tendency is to accept clinical results in this branch of therapeutics even when obtained in apparent opposition to established laws of electro-physiology. Seeming discrepancies it is hoped will be explained with an increased knowledge of electricity and morbid processes. In the words of Dr. Lincoln:—

"It can hardly be necessary to urge upon the reader the inestimable value of having a truly scientific basis for our therapeutical researches. Physiology, however imperfectly known, must be accepted as the best guide we possess; it is a better guide than bare conjecture; and all true progress in therapeutics must bring our practice into increasing harmony with the known rules of healthy and diseased action in the organs of the body."

Dr. Lincoln's work is what it purports to be, a "condensed manual." With the rules for practice there is also a crowd of theoretical views gathered from

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[1] Clinical Researches in Electro-Surgery.